



CS4- CS4-ADJ32VOL5P3(Ab)
WR Doc ID: 4723089

State of Washington
Trust Water Right Report of Examination
CS4-ADJ32VOL5P(Ab)
Change in Purpose and Place of Use

PRIORITY DATE	CLASS	WATER RIGHT NUMBER
1894	One	Gold Creek Adjudicated Certificate No. 3 CS4-ADJ32VOL5P3(Ab)

NAME OF PARTY CONVEYING RIGHT TO TRUST	MAILING ADDRESS
Washington Water Project of Trout Unlimited	Attn: Lisa Pelly, Director Washington Water Project 103 Palouse Street, Suite 14 Wenatchee, WA 98801

Purpose and Quantity

The purpose of use will be instream flow with out-of-stream use proposed from the Columbia River.

Table 1:
Primary Reach.

	May	June	July	Aug	Sept	Oct	Total
Qi (gpm)	62.16	141.72	179.72	126.79	83.58	17.79	---
Qa (af)	6.56	18.74	24.60	17.32	11.07	0.79	79.08

Table 2:
Secondary Reach.

	May	June	July	Aug	Sept	Oct	Total
Qi (gpm)	52.84	120.47	152.76	107.77	71.04	15.12	---
Qa (af)	4.34	12.40	16.27	11.45	7.32	0.52	52.31

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Okanogan	Methow River	Columbia River	48

Place of use (See Figures 2 & 3 on page 3)

Place of use – Methow and Columbia Rivers.

Primary Reach – Begins at a point approximately 2,340 feet west and 100 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M.

Secondary Reach – Begins at a point approximately 2,340 feet west and 1,400 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M.

Provisions Related to the Trust Water Right

The state may not exercise the trust water right under this authorization if an equal quantity of water is not physically available for this class water right at the historic diversion point on Gold Creek within the SW¼NE¼ of Section 17, T. 31 N., R. 22 E.W.M.

Figure 1: Place of Use & Point of Withdrawal

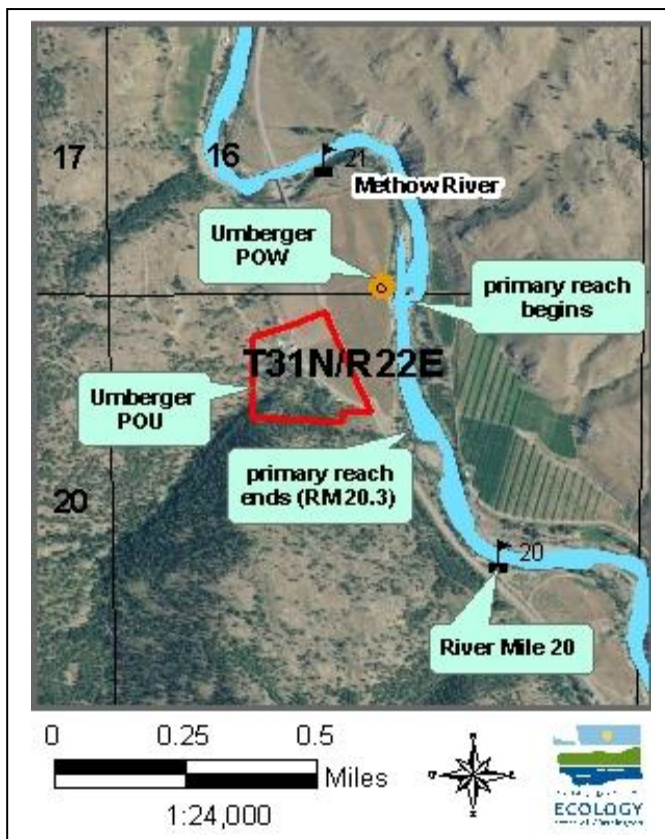
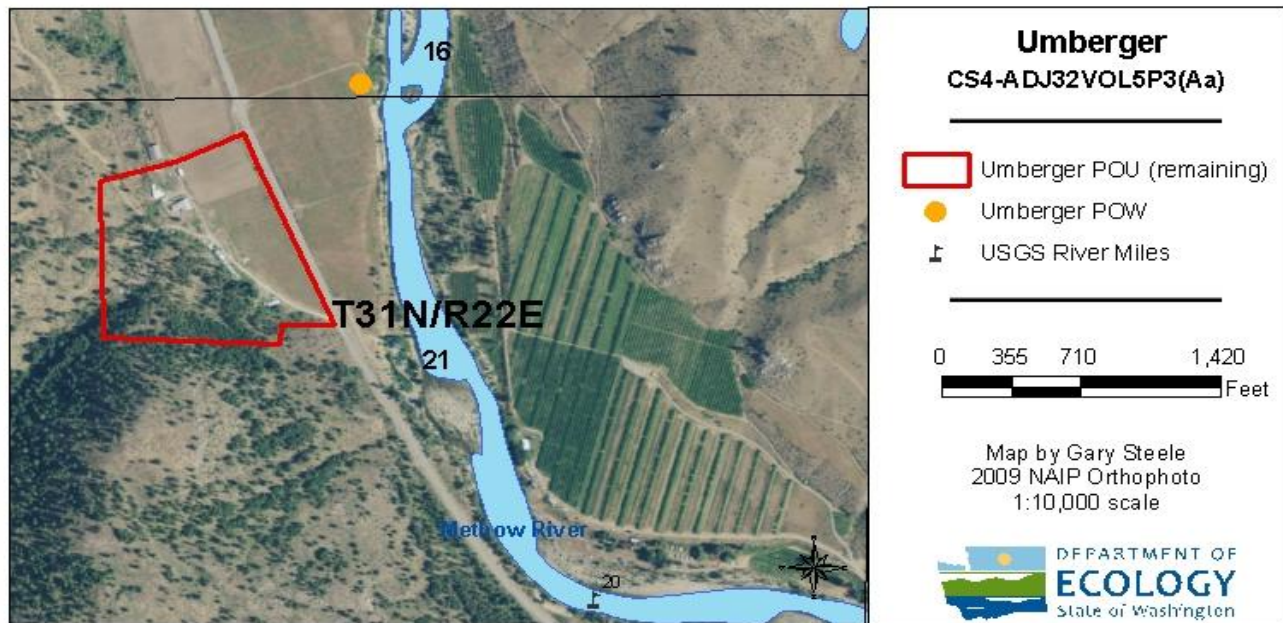


Figure 2: Primary Reach

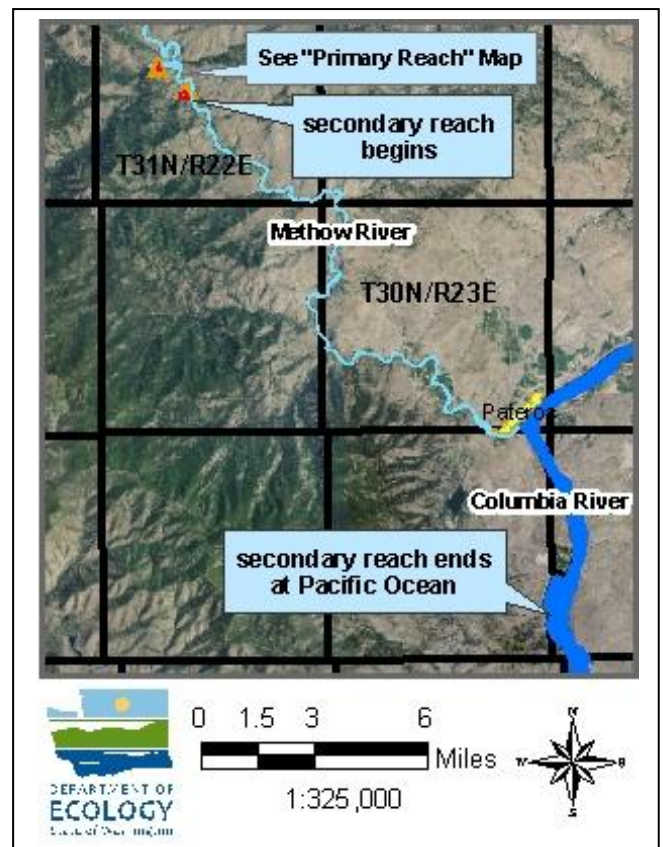


Figure 3: Secondary Reach

**PORTION OF WATER RIGHT
NOT PLACED INTO TRUST
WRTS File No: CS4-ADJ32VOL5P3(Aa)**

PRIORITY DATE	CLASS	WATER RIGHT NUMBER
1894	One	Gold Creek Adjudicated Certificate No. 3 CS4-ADJ32VOL5P3(Aa)

WATER RIGHT HOLDER	MAILING ADDRESS
John W. and Ruth Umberger	1639 State Route 13 Methow, WA 98834-9604

Purpose and Quantity

A total of 28.633 acre-feet per year (af/yr), at a maximum rate of 64.05 gallons-per-minute (gpm), will not be placed in trust but retained by the Umbergers. This portion of the applicants' remaining water right will consist of:

- 27.2 acre-feet (af) for irrigation April 15 through September 15.
- 1.0 af for continuous single-domestic use from January 1 through December 31.
- 0.433 af for continuous stock watering use from January 1 through December 31.

Source Location

COUNTY	WATERBODY	TRIBUTARY TO				WATER RESOURCE INVENTORY AREA	
Okanogan	Methow River	Columbia River				48	
SOURCE FACILITY/DEVICE	PARCEL	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
A well	3122160023	31 N.	22 E.W.M.	16	SE¼SW¼	48.17927 N	120.09892 W

The well is located 74 feet north and 82 feet east of the S¼ corner of Section 16, T. 31 N., R. 22 E.W.M., being about 100 feet west from the Methow River.

Place of use (See Figure 1 map on page 2)

The 6.1-acre place of use is located within parcel number 3122210021, in the NE¼NW¼ corner of Section 21, T. 31 N., R. 22 E.W.M., in Okanogan County, State of Washington.

Description of Water System

The current water system consists only of a 12-inch, 46-foot deep well located approximately 100 feet west of the Methow River. The well captures water from the Methow River via an unconsolidated aquifer. The well installation was completed in October 1994. This well has provided water for irrigation, domestic, and stock water uses.

Provisions Related to the Portion of the Water Right Not Placed in Trust

- The applicants will permanently fallow 7.55 acres of their remaining 13.65-acres of irrigable land. The historic irrigation of the fallowed acreage will be the source for the subject trust water right.
- The applicant may not withdraw water under this authorization if an equal quantity of water is not physically available for this class water right at the historic diversion point on Gold Creek within the SW¼NE¼ of Section 17, T. 31 N., R. 22 E.W.M.
- The water use authorized under this filing shall be considered non-additive to any water rights confirmed for said claim as a result of a general adjudication through Superior Court, should adjudication be undertaken.
- The remaining portion of the applicants' Gold Creek Adjudicated Certificate No. 3 shall be reduced to 25.873 af/yr at a maximum rate of 64.05 gpm for annual irrigation from April 15 to September 15, and 0.433 af/yr for stock water and 1.0 af/yr for domestic use, both continuous.
- Measurement of Water Use:

Measurement of Water Use	
How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	By January 31st of each calendar year.
What volume should be reported?	Maximum rate of withdrawal and total annual volume in acre-feet.

- Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Regional Office for forms to submit your water use data.
- Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times to the project location and to inspect at reasonable times records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Advisory to Applicant – Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions and, therefore, will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia, WA 98504-7477. Internet: <http://dor.wa.gov/>. E-mail: REETSP@DOR.WA.GOV.

Findings of Facts

Upon reviewing the investigator's report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights or detrimental to the public interest.

Therefore, I ORDER the requested change of place- and purpose of use under Trust Water Right Application No. CS4-ADJ32VOL5P3(Ab), be approved subject to existing rights and the provisions specified above.

YOUR RIGHT TO APPEAL

You have a right to appeal this decision to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this decision. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this decision:

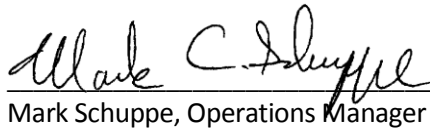
- File your appeal and a copy of this decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Yakima, Washington, this 17th day of June 2011.



Mark Schuppe, Operations Manager
Office of Columbia River
Central Regional Office

INVESTIGATOR'S REPORT

BACKGROUND – Description and Purpose of Proposed Change

On December 2, 2010, the Department of Ecology (Ecology) received an *Application To Enter A Water Right Into The Trust Water Rights Program* from Washington Water Project (WWP) on behalf of John and Ruth Umberger of Methow, Washington (applicants). The applicants propose to sell a portion of their adjudicated certificate to Ecology's Trust Water Rights Program (TWRP) through WWP. The application includes requesting a change to the purpose of use for the irrigation portion being proffered to the TWRP to instream flow. The application was accompanied with a Purchase and Sale Agreement (Agreement) between the applicants and WWP stating the parameters of their proposed water right sale.

Purchase and Sale Agreement (Agreement)

The Agreement between John and Ruth Umberger and Washington Water Project, offering to sell a portion of their water right to the state's TWRP, accompanied their trust water right application. The Agreement states that the Umbergers will retain an annual quantity of 28.633 af/yr, inclusive of 0.433 af/yr for continuous stock watering and 1.0 af/yr for continuous general domestic use leaving 27.2 af/yr for irrigation purpose. They also wish to retain 495.39 gpm of *surplus water* (Agreement, Exhibit E)¹ that was authorized in the adjudication of this water right. The reduction in irrigable land by the Umbergers to 6.1-acres may consequently reduce the quantity of their authorized surplus water to 54.75 gpm.

The analysis of the quantities associated with the water right sales and the determination of the consumptive portion remaining is 26.78 af/yr shy of the stated 79.08 af/yr offered for sale as agreed to in the Agreement.

The applicants have elected to retain a portion of their water right to maintain irrigation for 6.1 acres and water for general domestic and stock water uses, and any available surplus water as authorized under Gold Creek Adjudicated Certificate No. 3.

Table 3 shows attributes of Adjudicated Gold Creek Certificate No. 3 and of the Proposed Change.

Table 3: Summary of Existing Attributes and Proposed Changes to CS4-ADJ32VOL5P3

Attributes	Existing	Proposed
Name	John W. & Ruth Umberger	State of Washington, Dept. of Ecology, Trust Water Rights Program
Priority Date Date of Application	1894	December 2, 2010
Instantaneous Quantity (gpm)	292.1	216.8
Annual Quantity (af)	107.78	79.08
Source	Methow River	No change

¹ Surplus water is defined in the Gold Creek Adjudication as that water available after all adjudicated rights are filled, are allotted to the water users in the order of their priority at the rate of 1 cu. ft. per second for each 50 acres. Since the Umbergers will only retain 6.1-acres of irrigation, they are only entitled to 0.122 cfs (or 54.75 gpm), at most. Whether he is entitled to any of this surplus water is questionable since they no longer maintain a surface water diversion.

Point of Withdrawal (POW)	Approximately 74 feet north and 82 feet east of the S¼ corner of Section 16, T. 31 N., R. 22 E.W.M. The well is located approximately 100 feet west from the Methow River.	No change
Purpose of use	Irrigation, domestic, stock water	Instream flow and out-of-stream reallocation
Period of Use	April 15 through September 15 for irrigation; year round for domestic and stock water uses.	April 15 through September 15
Place of use (POU)	Within parcel number 3122210021, in the NE¼NW¼ corner of Section 21, T. 31 N., R. 22 E.W.M., in Okanogan County, State of Washington.	In the Methow River, the primary reach starting at about RM 20.1 and ends at about RM 20.3. The secondary reach begins at about RM 20.3 and continues downstream to the Columbia River, terminating at the Pacific Ocean.

Expedited Processing

The subject application qualifies for priority processing under WAC 173-152-050(2)(c)(ii), whereby an application for change or transfer of water into the state's Trust Water Rights Program in accordance with Chapters 90.38 or 90.42 RCW may be processed prior to competing applications if that transfer provides a substantial environmental benefit.

The environmental benefit from this project comes from the reduced withdrawal of groundwater that is in hydraulic continuity with the Methow River resulting in an increase to the instream flow in the secondary reach. The secondary reach commences at or about River Mile 20.3 on the Methow River and continues to the Columbia River downstream to the Pacific Ocean.

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in Water Right Change Application No. CS4-ADJ32VOL5P3(Ab).

- **Public Notice**

The public was noticed in the following three newspapers, on the dates stated:

1. Quad City Herald of Brewster, WA on March 17 & 24, 2011
2. Tri-City Herald of Kennewick, WA on March 17 & 24, 2011
3. The Columbian of Vancouver, WA on March 16 & 23, 2011

- **State Environmental Policy Act (SEPA)**

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether likely, significant adverse environmental impacts may be present), if any one of the following conditions are met:

- It is a surface water right application for more than 1 cubic-foot-per-second (cfs). If the project is for agricultural irrigation, the threshold is increased to 50 cfs, so long as the project will not receive public subsidies.
- It is a groundwater right application for more than 2,250 gallons-per-minute.

- It is an application combined with other water right applications for the same project that would exceed the above stated diversionary or withdrawal rates.
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
- It is part of a series of exempt actions that, considered together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

This application does not meet any of these conditions and thus it is exempt from the SEPA and a threshold determination is not required.

- **Water Resources Statutes**

- RCW 90.42.040(3) states that a trust water right retains the same priority date as the water right from which it originated, but as between the two rights, the trust right shall be deemed to be inferior in priority unless otherwise specified by an agreement between the state and the party holding the original right.
- RCW 90.42.040(4)(a) states that exercise of a trust water right may be authorized only if the department first determines that neither water rights existing at the time the trust water right is established, nor the public interest will be impaired.
- RCW 90.42.040(4)(b) states that if impairment becomes apparent during the time a trust water right is being exercised, the department shall cease or modify the use of the trust water right to eliminate the impairment.
- RCW 90.42.040(5)(a)&(b) states that before any trust water right is created or modified, the department shall, at a minimum, require that a notice be published in a newspaper of general circulation published in the county or counties in which the storage, diversion, and use are to be made, and in other newspapers as the department determines is necessary, once a week for two consecutive weeks. At the same time the department shall send a notice containing pertinent information to all appropriate state agencies, potentially affected local governments and federally recognized tribal governments, and other interested parties.

- **Water Resources Guidance**

- Guidance 1210 – *Determining Irrigation Efficiency and Consumptive Use*
- Guidance 1220 – *Guidance for Processing and Managing Trust Water Rights*
- Procedure 1000 – *Water Right Administrative Procedures* (for Assignments)
- Procedure 1210 – *Calculating and Applying the Annual Consumptive Quantity (ACQ)*

INVESTIGATION – History of Water Use

In April 1993, John and Ruth Umberger (applicants) submitted an application to substitute their historic point of diversion on Gold Creek, as authorized under their Gold Creek Adjudicated Certificate No. 3, to a point of withdrawal (POW) in groundwater connected to the Methow River. In May 2002, Ecology issued final Change Report of Examination (ROE), CS4-ADJ32VOL5P3, authorizing the change from a surface water diversion to a groundwater withdrawal.

The historic irrigation of the 55-acres within the authorized place of use included 40-acres of apples with cover and 15-acres of pasture land. The irrigation method for the orchard was under-tree sprinklers and for the pasture, wheel and hand lines. The water use calculations in the 2002 Change ROE applied a 65-percent irrigation efficiency (Ea) for both methods and a 10-percent evaporative loss, based on available information at that time.

In this Report of Examination, the Ea of 65-percent applied to past irrigation methods has been changed to reflect more-current methodologies as provided in Ecology's Guidance 1210 – *Determining Irrigation Efficiency and Consumptive Use* (GUID-1210), which was not developed when the 2002 Change ROE was written. This ROE applies a 75-percent Ea as a more accurate measurement.

Beginning in 2007, the applicants began selling portions of their land and water right. Following each sale and pursuant to Ecology’s Water Resources Program Procedure 1000, *Water Right Administrative Procedures*, assignments were issued for each sale of a portion of the Umbergers’ water right, as shown in Table 4, and illustrated in Figure 4.

Table 4: Water Right Sales of CS4-ADJ32VOL5P3						
Date	Event	Irrigated Acres	Stock Water (AF)	Domestic Use (AF)	Irrigation Use (AF)	Instantaneous Rate (GPM)
5/2002	Change ROE	55.2	0.5	1.0	211.68	579.6
	Minus administrative assignments:					
6/2007	To Mus (B)	11	0	0	37.4	101.4
2/2008	To Okanogan PUD (C)	20.09	0	0	27.2	75.3
12/2009	To Sheyner (D)	10.46	0.067	0	40.8	110.8
12/2009	Remaining with Umberger after all divisions (Aa)	13.65	0.433	1.0	106.28	292.1
3/2011	Umbergers’ balance after proposed sale to TWRP	6.1	0.433	1.0	27.2	75.3

- In the May 2002 Change ROE, the extent of this water right was tentatively determined to be:
- For irrigation purpose: 211.68 acre-feet from April 15 to September 15.
 - For domestic-use purpose: 1.0 acre-foot from January 1 to December 31.
 - For stock water purpose: 0.50 acre-foot from January 1 to December 31.
 - The Gold Creek Certificate also authorizes “surplus water,” which is defined as “... after all adjudicated rights are filled, are allotted to the water users in the order of their priority at the rate of 1 cu. ft. per second for each 50 acres.” For the applicants, their original rate was set at 495.36 gpm of “surplus water.”

In 2005, 2009, and 2010 the subject water right was accepted in the TWRP while during 2003, 2004, 2006, 2007, and 2008 there is no documented beneficial use. However, there has been no continuous five-year period of non-use, beginning with the 2003 irrigation season to present, of any or all of the subject water right.

The Water Right Sales: Consumptive & Non-Consumptive Breakdown

The sale of portions of the subject water right was not proportionate to the historic water duty applied to the authorized place of use, most notable was the sale to Okanogan Public Utility District. Table 5 shows the consumptive (Cu) and non-consumptive (non-Cu) portions of each sale:

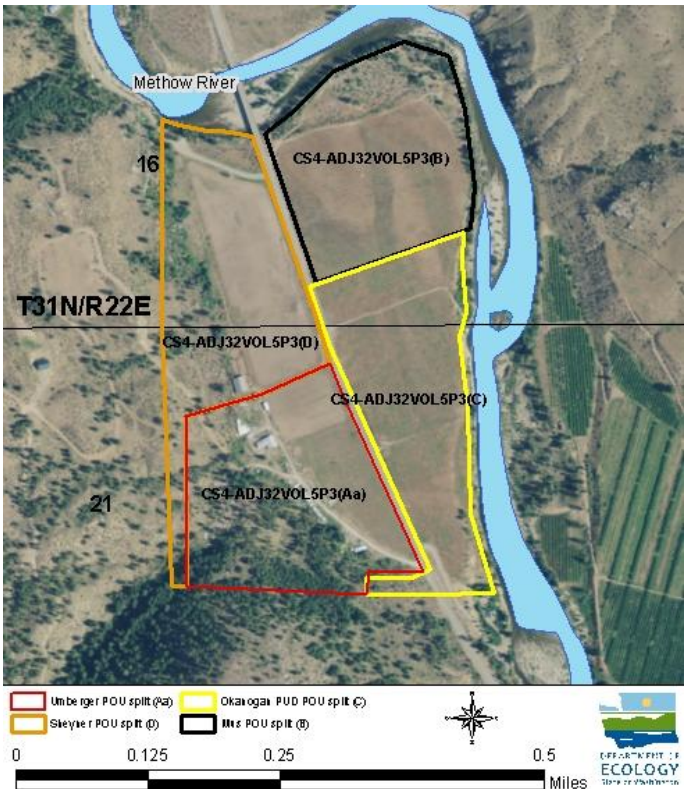


Figure 4: Land Sales

Table 5: Cu & Non-Cu Breakdown per Water Sale

Buyer	Crop	Acres	Acre-Feet Sold	Cu (af)	Non-Cu (af)
Mus	Apples	11.0	37.4	32.45	4.95
Okanogan PUD	Apples	20.09	27.2	27.2	0
Sheyner	Pasture	10.46	40.8	26.14	14.66
Totals	---	41.55	105.4	85.79	19.61

The portion of the subject water right sold to Okanogan PUD (27.2 af), left an excess of 32.055 af of consumptive water with the Umbergers. The historic total irrigation requirement (TIR) applied to the 20.09-acres, was 69.71 af, of which 59.255 af was consumptive. The calculations for this are as follows:

- $CIR = 31.25\text{-inches per acre, or } 2.6 \text{ af/a for apples with cover.}$
- $TIR = CIR/Ea = 2.6/0.75 = 3.47 \text{ af/a.}$
- $Total \text{ Use} = TIR \times \text{acres} = 3.47 \text{ af} \times 20.09\text{-acres} = 69.71 \text{ af.}$
- $Cu = TIR \times \%Cu = 3.47\text{af/a} \times 0.85 = 2.95 \text{ af/a.}$
- $Total \text{ Cu} = Cu \times \text{acres} = 2.95 \text{ af/a} \times 20.09\text{-acres} = 59.26.$

Thus, the 59.255 af of Cu water minus the 27.2 af sold equals 32.055 af of consumptive water remaining with the Umbergers in addition to the consumptive and non-consumptive portions of the right to irrigate the remaining 13.65 acres. This Cu water is available for sale to the Trust Water Rights Program.

Annual Consumptive Quantity (ACQ)

A change in the place of use, point of diversion, and or purpose of use of a water right to enable irrigation of additional acreage or the addition of new uses may be permitted if the change results in no increase in the annual consumptive quantity of water used under the water right.

ACQ means the estimated or actual annual amount of water diverted pursuant to the water right, reduced by the estimated annual amount of return flows, averaged over the two years of greatest use within the most recent five-year period of continuous beneficial use of the water right.

The applicants seek to add instream flow as a purpose of use to existing uses while maintaining those existing uses, which are irrigation, stock watering, and general domestic. The addition of instream flow as a purpose of use, while maintaining the current uses, requires that Ecology follow RCW 90.03.380(1), which states that Ecology must perform an ACQ analysis to determine that the annual consumptive quantity will not increase as a result of the change to the water right. The goal is to ensure that future consumptive use will not exceed the historic use of the water right.

The time period for the ACQ analysis is 1997 to 2001 when the water right was fully and beneficially used. This timeframe was selected because it was the most-recent five-year period of continuous beneficial use. Starting with the 2002 season and continuing to present day, the Umbergers have ceased irrigation of their irrigable land.

Calculations of the ACQ can be based on one or more of the five methods below:

1. A flow meter.
2. Power records.
3. Crop production or sales records.
4. Aerial photography used in conjunction with the Washington Irrigation Guide (WIG) crop irrigation requirements.
5. Affidavits attesting to demonstrated water use.

The lack of metering, power, or crop records by the applicant leaves calculating their annual water use by relying on aerial photography and the WIG's crop estimates. The crops historically irrigated on the authorized place of use consisted of 40-acres of apples with cover, and 15-acres of pasture. The 6.1-acres being retained by the applicant was part of the former 40-acre apple orchard.

The May 2002 Change ROE, CS4-ADJ32VOL5P3, authorized a change from a point of diversion (POD) on Gold Creek to a new point of withdrawal (POW) to irrigate the 55-acres of apple orchard and pasture land. The initial Gold Creek Adjudicated Certificate No. 3 authorized beneficial use within an 80-acre place of use (POU). In the 2002 Report, it was determined that beginning with the 1995 irrigation season, only 55-acres of the initial 80-acre POU had been continuously irrigated.

The Methow reporting station in the Washington Irrigation Guide (WIG) estimates the per-acre *crop irrigation requirement* (CIR) for apples with cover is 31.25-inches, or 2.6 acre-feet-per-acre (af/a) and pasture is 26.49-inches, or 2.2 af/a. Since the remaining 13.65-acres with the Umbergers historically consisted of apple orchard and pasture, with 9.11-acres in apple orchard and 4.54-acres in pasture, these are the irrigated crops being reviewed as part of the ACQ analysis.

The Ea of impact sprinklers used for the apple orchard and of hand and wheel lines used for the pasture land was determined to each operate at 75-percent. The *total irrigation requirement*, or TIR, is found by dividing the CIR by Ea. An evaporative loss, considered a consumptive use, is 10-percent.

The water right as it existed in 2002 when it underwent its last extent and validity review, as evidenced by the issuance of Change ROE CS4-ADJ32VOL5P3, found 55-acres of historic irrigation that consisted of 40-acres of apples and 15-acres of pasture. Tables 6 and 7 follow GUID-1210 procedures for calculation of the consumptive use of the water right.

Table 6: Historic Consumptive Use

Crop	Acres	Consumptive Use (af)
Apples (w/cover)	40	118.06
Pasture	15	37.53
Totals	55	155.59

From analysis of aerial photography, the only water right sale entirely on pasture was to Sheyner (see Table 7), who bought 10.46-acres. Since a total of 15-acres was irrigated pasture that left 4.54-acres as part of the Umbergers 13.65-acres. Table 9 shows calculations determining the total water used and the consumptive quantity (Cu) historically applied to the Umbergers' remaining 13.65-acre place of use (POU).

Table 7: Historic Consumptive Water Remaining With Applicants

Crop	Acres	Consumptive Use (af)
Apples (w/cover)	9.11	26.89
Pasture	4.54	11.36
Totals	13.65	38.25

The Umbergers will retain irrigation water for 6.1-acres of their remaining 13.65-acre POU. The ACQ analysis on the 6.1 acres will be calculated based on the crop historically grown on this land, which was apples, with cover using under-tree sprinklers. Table 8 shows those calculations:

Table 8: Estimated Total Water & Consumptive Uses for 6.1-Acres of Apples	inches	acre-foot
CIR (WIG Methow Station)	31.25"	2.6
TIR per acre (CIR ÷ Ea ∴ TIR = 2.6 ÷ 0.75)	41.67"	3.47
Total Water Use (TIR 41.67" x 6.1)	270.86"	22.57
Cu (Cu = TIR x %Cu ∴ Cu = 41.67" x 0.85)	35.42"	2.95
Total Cu = Cu x # acres ∴ 35.4 x 6.1	216.06"	18.0

The Umbergers began with 55.2 acres for irrigation. Subtracting the three acreage sales (see Table 4) to the parties of Mus (11-acres), Okanogan PUD (20.09-acres), and Sheyner (10.46-acres), there are 13.65-acres remaining under the subject water right. Subtracting the 6.1-acres being retained by the Umbergers leaves the 7.55-acres of irrigation water for the proposed sale to the TWRP. The quantity of that portion of the subject water right that will enter the TWRP comes from the historic irrigation that was applied to the 7.55-acres that will be fallowed from any future irrigation plus the unsold consumptive portion of the sale to Okanogan PUD.

The estimated consumptively used water for the 13.65-acres of apple orchard and pastureland compared against the historic irrigation of the 6.1-acres plus the consumptive quantity derived from the 7.55-acres of fallowed land remaining, shows no increase in consumptive use, as shown in Table 7.

Table 9: Consumptive Use Comparison (af)

13.65-acres of apple orchard (Table 7)		38.25
• Retained 6.1-acre portion (Table 8)	18.00	
• Proposed instream flow from fallowing 7.55-acres	20.25	
	38.25	38.25

The 32.1 af of consumptive water remaining with the Umbergers, after the sale to Okanogan PUD, when added to the consumptive quantity of 38.25 af as shown in Table 9, will not exceed the historic quantities that were applied to the Umbergers 13.65-acres and the 20.09-acres that were sold to Okanogan PUD.

Other Water Rights Appurtenant to the Place of Use

Water right claim 302465 is appurtenant to the Umberger place of use. On March 24, 1998, Ecology received from Mr. Umberger a *Statement of Water Right Claim*. This filing was in accord with RCW 90.14.068 that authorized the state to accept from claimants *Statements of Claims for Water Rights*. A second water right claim, number 082535, asserts a right to the withdrawal of groundwater under the groundwater permit exemption.

Hydrologic/Hydrogeologic Evaluation

The place of water use in Section 21, T31N/R22E is underlain by Cashmont sandy loam (NRCS Web Soil Survey, 2011) which is underlain by unconsolidated sands, silts, gravels, and clay. Highway 153 borders the east side of the property and likely acts as a semi-pervious dam to surface runoff. Bedrock borders the west side of the property and the valley floor slopes very gently in an easterly direction towards the Methow River. The sandy loam is classified as well drained and the unconsolidated sediments likely have a relatively high porosity. Both of these factors would allow for easy infiltration of water applied to the surface in excess of that required by irrigated crops and that lost to evapotranspiration. It is likely that return flows from the subject property re-enter the Methow River in the area between river mile 20.3 and 20.5. Therefore, river mile 20.3 approximately defines the end of the primary reach and the beginning of the secondary reach (Dixon, LHg, 4/20/2011).

Trust Water Right Place of Use

Ecology typically manages its trust water rights by defining a primary and a secondary reach. The primary reach is the length of stream between the historic point of diversion, or for groundwater withdrawals, the point where water withdrawal from a well impacts a surface flow, and where any of the water diverted or withdrawn, not consumed, returns to the stream. The secondary reach begins at the downstream end of the primary reach and is defined as that length of stream which benefits from a reduction in consumptive use. See Figure 5 The reaches for the subject water right.

The primary reach begins where impacts from well pumping affect the Methow River, being approximately 2,340 feet west and 100 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M. The primary reach ends approximately 2,340 feet west and 1,400 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M. See Figure 6.

The secondary reach begins where the primary reach ends, continuing in the Methow and Columbia Rivers, downstream to the Pacific Ocean.

Trust Water Right Calculations

The quantity of former consumptively used irrigation water available for purchase by the Trust Water Rights Program is 52.31 af. This quantity came via two avenues:

1. The consumptive portion of the fallowed 7.55-acres of former apple orchard and pastureland.
2. The consumptive portion of the water right sold to Okanogan PUD retained by the Umbergers.

At present, the Umbergers own 13.65-acres of land that remain after their three separate land and water right sales (see Table 4), from within their original 55.2-acres authorized place of use as described in the 2002 Change ROE. By their retention of 6.1-acres for future irrigation use, the 7.55-acres remaining will produce one portion of the proposed trust water right.

The estimate of historic total water use in the primary reach is shown in Table 10:

Table 10: Primary Reach

	May	June	July	Aug	Sept	Oct	Total
Qi (gpm)	62.16	141.72	179.72	126.79	83.58	17.79	---
Qa (af)	6.56	18.74	24.59	17.32	11.07	0.79	79.08

The estimate of historic consumptive water use that will be assigned to the secondary reach is shown in Table 11:

Table 11: Secondary Reach

	May	June	July	Aug	Sept	Oct	Total
Qi (gpm)	52.84	120.47	152.76	107.77	71.04	15.12	---
Qa (af)	4.34	12.40	16.27	11.45	7.32	0.52	52.31

Table 12 below shows the consumptive and non-consumptive portions of the rights that were sold. The TWRP may accept this quantity via a separate trust water right application and protect it in the historic primary reach. However, the TWRP cannot reallocate for any portion of the non-consumptive quantity for out-of-stream purposes. During the administrative divisions of the subject water right that documented the individual water right sales to Mus, Okanogan PUD, and Sheyner, there was no quantification of consumptive and non-consumptive portions of those sales.

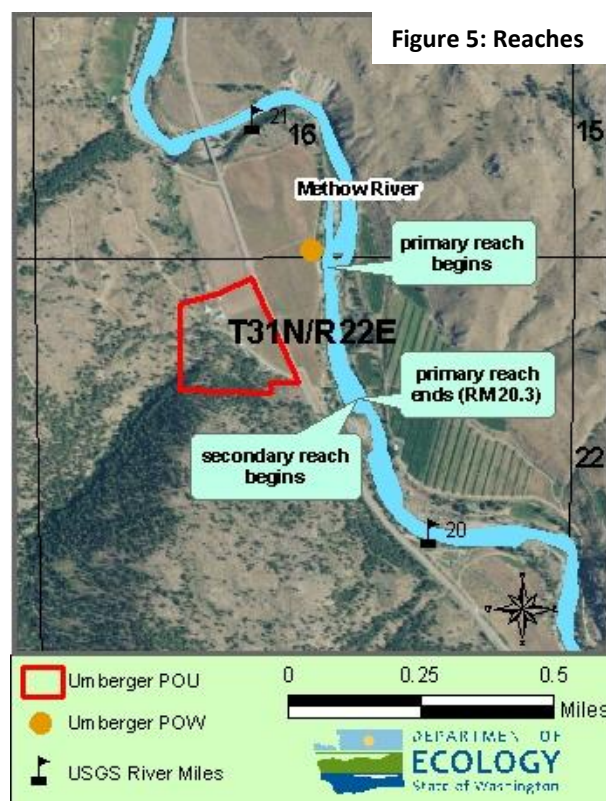


Table 12:
Non-Consumptive Portions of Water Right Sales

(a)	(b)	(c)	(d)	(e)	(f)
Purchaser	Acres	Crop	Annual Quantity Sold (af)	Consumptive Portion of Sale (af)	Non-Consumptive Portion (af)
Mus	11.0	apples	37.4	32.45	4.95
OPUD	20.09	apples	27.2	27.20	0
Sheyner	10.46	pasture	40.8	26.14	14.66
			105.40	85.79	19.61

Funding for the Trust Water Right Purchase

Funding to purchase the proposed trust water right would come via the Columbia River Basin Water Management Plan Account (Account), as authorized under RCW 90.90.010(2)(a). The funding is conditioned on the requirement that, absent legislative approval, any authorized future out-of-stream use must remain in the WRIA of origin, or Methow WRIA, No. 48. Figure 5 illustrates the restricted place of use for future out-of-stream uses.

Trust Water Management

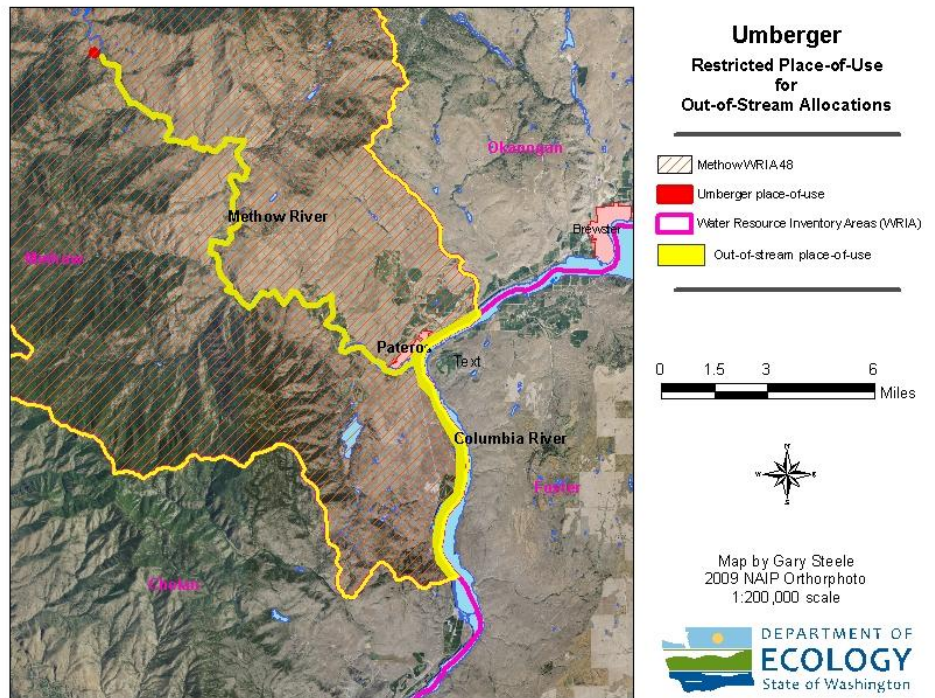
Ecology's ability to exercise and, if necessary, protect a trust water right, is an important factor when the state uses public funds to acquire a water right. Staff capacity and capability, agency priorities, available resources, and legal authority to regulate other water users can determine Ecology's ability to protect a trust water right. When water is available for all stakeholders, who draw from the same source, then these matters are of lesser concern. (Guidance 1220, p. 7)

A trust water right authorized under Chapter 90.42 RCW retains the same priority date as the water right from which it originated, but as between the two portions of a right that is partially acquired by Ecology, the trust water right will be inferior in priority unless otherwise specified by an agreement between the state and the party holding the original right. The applicants' Purchase and Sale Agreement does not include such a provision, therefore the proposed trust water right will be inferior in priority to its parent water right should curtailment of the parent water right be necessary.

The annual quantity and instantaneous rate of the trust water right, when added to the remaining portion of the originating water right, cannot exceed the total amount authorized under the originating water right, or the amount identified in an examination of the historical extent of the originating water right.

An Ecology watermaster or an appointed stream patrol has authority to regulate water rights if the water rights being regulated are adjudicated or authorized under state-issued water right certificates, (*Rettkowski v. Department of Ecology*). With approval of this proposed instream flow trust water right, the quantity accepted into the TRWP would be added to the statutory instream flow targets of the Methow and Columbia Rivers as defined under Chapters 173-548 WAC and 173-563 WAC, respectively.

Figure 5: Statutorily Restricted Place of Use



Impairment Considerations

Impairment is an adverse impact on the physical availability of water for a beneficial use by other authorized users whose water rights are entitled to protection. The protection against impairment by either the continued use by the applicants of the remaining portion of their water right, or, by the state's exercise of its trust water right, is ensured via the provision that the flow in Gold Creek must be sufficient to match the authorized, combined uses under either water right. This provision is listed under the *Provisions* sections in this report.

The exercise of a trust water right may be authorized when Ecology determines that neither water rights existing at the time the trust water right is established nor the public interest will be impaired. If impairment becomes apparent during the exercising of the trust water right, Ecology must cease or modify the use of the trust water right.

Public Interest Consideration

Pursuant to RCW 90.42.040(4)(a) exercise of a trust water right may be authorized only if Ecology first determines that the public interest will not be impaired. Ecology must consider how the change in purpose and the acceptance into the Trust Water Rights Program will affect a number of factors such as wildlife habitat, recreation, water quality, and human health. The environmental amenities and values associated with the area were taken into account during the consideration of this change application.

Consideration of Protests and Comments

No protests or comments were received for this change application.

CONCLUSIONS

- Approval of this water right change request as provisioned will not enlarge the water right or impair existing water rights.
- The author determines that Change Authorization No. CS4-ADJ32VOL5P(Ab) is appurtenant to the subject property and that beneficial use has occurred without any consecutive five-year period of non-use.
- The author tentatively determines that Change Authorization No. CS4-ADJ32VOL5P(Ab) represents a valid right to withdraw water from a well in a quantity not to exceed 79.08 af/yr at a maximum instantaneous rate of 64.05 gpm and is authorized for the purpose of instream flow, from April 15 through September 15, annually.
- Changing the purpose of use of a portion of this water right to enhance instream flow for approximately 20 miles of the lower Methow River and to provide mitigation for future out-of-stream uses from the mainstem Columbia River will not be a detriment to the public interest.
- A total of 22.69 acre-feet of consumptive water is available for purchase by the TWRP.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to CS4-ADJ32VOL5P3(Ab) be approved in the amounts and within the limitations listed below and subject to the provisions listed in the Report of Examination.

Attributes of the Portion Placed in Trust

Purpose and Associated Quantities

- For instream flow in the *primary reach* at a maximum instantaneous rate of 180 gpm and an annual quantity of 79.08 af/yr.
- For instream flow in the *secondary reach* at a maximum instantaneous rate of 153 gpm and an annual quantity of 52.31 af/yr.

Point of Withdrawal

Approximately 74 feet north and 82 feet east of the S¼ corner of Section 16, T. 31 N., R. 22 E.W.M. The well is located approximately 100 feet west from the Methow River.

Place of Use

The primary reach begins where withdrawals from the well impact river flow, which is located approximately 2,340 feet west and 100 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M., and ends where return flows historically reentered the river, which is located approximately 2,340 feet west and 1,400 feet south of the NE corner of Section 21, T. 31 N., R. 22 E.W.M.

The secondary reach begins where the primary reach ends and continues in the Methow River to the Columbia River downstream to the Pacific Ocean.

Table 13 shows the approximate monthly schedule of historic consumptive use in the secondary reach is as follows:

Table 13:

Approximate Extent of Historic Consumptive Use in the Secondary Reach.

	May	June	July	Aug	Sept	Oct	Total
Qi (gpm)	52.84	120.47	152.76	107.77	71.04	15.12	---
Qa (af)	4.34	12.40	16.27	11.45	7.32	0.52	52.31

Attributes of the Portion Not Placed in Trust

Purpose and Associated Quantities

A total of 28.633 acre-feet per year (af/yr), at a maximum rate of 64.05 gallons-per-minute (gpm), will not be placed in trust but retained by the Umbergers. This portion of the Umbergers' remaining water right will consist of:

- 27.2 acre-feet for irrigation April 15 through September 15.
- 1.0 acre-foot for continuous single-domestic use from January 1 through December 31.
- 0.433 acre-foot for continuous stock watering use from January 1 through December 31.

Point of Withdrawal

Approximately 74 feet north and 82 feet east of the S¼ corner of Section 16, T. 31 N., R. 22 E.W.M. The well is located approximately 100 feet west from the Methow River.

Place of Use

Within parcel number 3122210021, in the NE¼NW¼ corner of Section 21, T. 31 N., R. 22 E.W.M., in Okanogan County, State of Washington.

Report by:



Gary Steele, Trust Water Rights Coordinator
Office of Columbia River, Yakima, WA

June 17, 2011

Date

WORKS CITED

Dixon, R., LHg, *Hydrogeological Report on the Primary & Secondary Reaches for Umberger Water Right Certificate CS4-ADJ32VOL5P*, April 20, 2011.

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